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09/722,604	11/27/2000	Antti Lappetelainen	944-001.040	5788

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[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2665

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. <b>09/722,604</b>	Applicant(s) <b>Lappetelainen</b>
Examiner <b>Man Phan</b>	Art Unit <b>2665</b>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1)  Responsive to communication(s) filed on Nov 27, 2000

2a)  This action is FINAL.      2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

4)  Claim(s) 1-19 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1, 13, and 14 is/are rejected.

7)  Claim(s) 2-12 and 15-19 is/are objected to.

8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some\* c)  None of:  
 1.  Certified copies of the priority documents have been received.  
 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

1)  Notice of References Cited (PTO-892)  
 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5

4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_  
 5)  Notice of Informal Patent Application (PTO-152)  
 6)  Other: \_\_\_\_\_

## **DETAILED ACTION**

1. The application of Lappetelainen for a "Adaptive transmission channel allocation method and system for ISM and unlicensed frequency bands" filed 11/27/2000 has been examined. Claim 1-19 are pending in the application.

### ***Claim Objections***

2. Claims 1 and 14 are objected to because of the following informalities:

The claims contain the phrase "capable of". It has been held that the recitation that an element is "capable of" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahany (US#5,696,903) in view of Lansford (US#6,594,302).

With respect to claims 1, 13 and 14, both Mahany (US#5,696,903) and Lansford (US#6,594,302) disclose a method and system for establishing a connection link in hierarchical communication system including a master device and slave devices. Mahany teaches in Figs. 1b,c diagrams illustrated the hierarchical communication system utilizing spread spectrum frequency hopping according to the essential features of the claims, in which the communication on the first local area network is accomplished by spread spectrum frequency hopping communication. A second local area network allows for radio communication between a portable computer device and peripheral devices with built-in transceivers utilized by the portable computer device, wherein the connection link between the computer device and peripheral devices, and the connection link among the peripheral devices being carried out in a frequency hopping fashion (See also Figs. 28a,b, and the Abstract; Col. 37, lines 13 plus and Col. 42, lines 31 plus).

However, Mahany do not disclose expressly wherein a non-frequency hopping connection link is established between the peripheral devices. In the same field of endeavor, Lansford discloses a non-frequency-hopping node and a method for using such a node to transmit and receive data in a frequency-hopping system (See Figs 3, 4 and the Abstract). In one embodiment, a non-frequency-hopping node interacts with a frequency-hopping spread-spectrum (FHSS) system, which comprises a wireless medium or electromagnetic airwaves, a frequency-hopping node coupled to the wireless medium and an access point coupled to the wireless medium. The non-frequency-hopping node

connects to the wireless medium and listens for an active signal generated by the FHSS system on a predetermined frequency channel. Upon detecting the active signal, the non-frequency -hopping node exchanges information with the FHSS system on the predetermined frequency channel (Col. 4, lines 17 plus).

One skilled in the art would have recognized the need for effectively and efficiently facilitates operating in the non-frequency-hopping fashion in an environment where the frequency-hopping fashion is also used, and would have applied Lansford' novel use of non-frequency-hopping node to transmit and receive data in a frequency-hopping system into Maahany's hierarchical communications system using frequency hopping. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Lnsford's fixed frequency transceiver for use in a frequency hopping system into Mahany's hierarchical communications system using microlink, data rate switching, frequency hopping and vehicular local area networking with the motivation being to provide a method and system for allocation of an adaptive transmission channel in a piconet operating in the Bluetooth radio frequency band.

*Allowable Subject Matter*

4. Claims 2-12 and 15-19 are objected to as being dependent upon the rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

6. The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest the steps of measuring channel conditions in at least a portion of the plurality of frequency channels for determining whether the communication channel for the non-frequency-hopping connection link is available based on the measured condition, as specifically recited in claim 2; wherein the first mechanism determines whether the communication channel for the non-frequency-hopping connection link is available based on channel conditions including carrier power of the frequency channels and interference and noise levels, which may effect the non-frequency-hopping connection link, the system further comprising a fourth mechanism for measuring the channel conditions, as specifically recited in claim 15.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Gavette (US#6,321,095) is cited to show the wireless communication

approach.

The Packer et al. (US#5,818,828) is cited to show the hybrid multiple access protocol for wireless frequency hopping microcells with adaptive backhaul and heartbeat.

The Izumi et al. (US#6,130,885) is cited to show the frequency hopping wireless communication system capable of simultaneously communicating different data and frequency hopping wireless communication apparatus.

The Cadd (US#5,586,120) is cited to show the method for a channel hopping communication system with variable transmission bandwidth.

The Souissi et al. (US#5,809,059) is cited to show the method and apparatus for spread spectrum, channel assignment.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (703)305-1029. The examiner can normally be reached on Mon - Fri from 6:30 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

8. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:** (703) 872-9314, (for formal communications intended for entry)

**Or:** (703) 305-3988 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021

Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Mphan

09/10/2003.

*Manu. Phan*